

Appl. No. 10/759,505
Amdt dated October 26, 2007
Reply to Office Action of July 26, 2007
Att. Docket No.: 1279-400C1

Filing date: January 16, 2004
Applicant Name: Bazan et al.
Examiner: Camie S. Thompson
Art Unit: 1774

REMARKS/ARGUMENTS

Claims 4-5, 12-15, 18-22 are pending. Claims 20-22 are allowed.

Claims 23 has been added, and finds support in claim 4.

Claims 4-5, 12-15, 18- 21 were amended to correct the misspelling of binaphthyl. These changes are believed to have overcome the Examiner's objection to these claims.

Claim 15 has been amended to include the limitations of its base claim, claim 14. Accordingly, this amendment is believed to overcome the Examiner's objections, and allowance is respectfully requested.

The rejection of claims 4-5, 12-14 and 18-19 under 35 U.S.C. 103(a) as being anticipated by Toguchi et al. (U.S. Patent Number 6,582,837) is respectfully traversed. Toguchi does not render Applicants claims obvious for the following reasons. First, Applicants' claims 4-5, 12 and 14 are directed to formulas, *inter alia*, where particular positions on the binaphthyl framework are restricted to certain substitutions. For instance, at positions Ar^1 and Ar^2 (corresponding to R_2^5 and R_2^{12} of Toguchi et al.'s disclosed generic formulas II-1 and II-2) there can be only substituted or non-substituted polycyclic aromatic hydrocarbon or a substituted or non-substituted aromatic heterocycles. Similarly, at R^1 , and R^2 (corresponding to R_2^1 and R_2^8 of Toguchi et al.) there can be only a hydroxyl group, a substituted or non-substituted alkyl group, or a substituted or non-substituted alkoxy group. In contrast, Toguchi et al. show generic formulas where substituted or non-substituted polycyclic aromatic hydrocarbon, a substituted or non-substituted aromatic heterocycles, hydroxyl group, a substituted or non-substituted alkyl group, or a substituted or non-substituted alkoxy group can be present independently at any of $R_2^1 - R_2^{14}$. Similarly, Applicants' claims 13, 18 and 19 are directed to formulas, *inter alia*, where at positions Ar^1 and Ar^2 there can be only substituted or non-substituted polycyclic aromatic hydrocarbon or a substituted or non-substituted aromatic heterocycles. In contrast, Toguchi et al. show no such limitations to their a generic formulas II-1 and II-2. Furthermore, Toguchi et al.'s formula II-2 is even more deficient for an obvious rejection because formula II-2 mentions "at least one of $R_2^1 - R_2^{14}$ is a diarylamino group represented by $-NAr_2^1 Ar_2^2$ wherein Ar_2^1 is a substituted aryl group having 6 to 20 carbon atoms which has at least one styryl

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substituent and Ar₂² is a substituted or unsubstituted aryl group having 6 to 20 carbon atoms", which is clearly not required in Applicants' claims.

Second, because Toguchi et al. show a generic formula where R₂¹ - R₂¹⁴ could independently represent a variety of substituents, their generic formula encompasses a vast and perhaps even an infinite number of compounds. Thus, it would be difficult for a person of skill in the art to envisage Applicants's claims in light of these numerous possibilities.

In this regard refer to MPEP 2131.02, to wit:

"A GENERIC CHEMICAL FORMULA WILL ANTICIPATE A CLAIMED SPECIES COVERED BY THE FORMULA WHEN THE SPECIES CAN BE "AT ONCE ENVISAGED" FROM THE FORMULA

When the compound is not specifically named, but instead it is necessary to select portions of teachings within a reference and combine them, e.g., select various substituents from a list of alternatives given for placement at specific sites on a generic chemical formula to arrive at a specific composition, anticipation can only be found if the classes of substituents are sufficiently limited or well delineated. Ex parte A, 17 USPQ2d 1716 (Bd. Pat. App. & Inter. 1990). If one of ordinary skill in the art is able to "at once envisage" the specific compound within the generic chemical formula, the compound is anticipated. One of ordinary skill in the art must be able to draw the structural formula or write the name of each of the compounds included in the generic formula before any of the compounds can be "at once envisaged." One may look to the preferred embodiments to determine which compounds can be anticipated. In re Petering, 301 F.2d 676, 133 USPQ 275 (CCPA 1962).

In In re Petering, the prior art disclosed a generic chemical formula "wherein X, Y, Z, P, and R"- represent either hydrogen or alkyl radicals, R a side chain containing an OH group." The court held that this formula, without more, could not anticipate a claim to 7-methyl-9-[d, l"-ribityl]-isoalloxazine because the generic formula encompassed a vast number and perhaps even an infinite number of compounds. However, the reference also disclosed preferred substituents for X, Y, Z, R, and R" as follows: where X, P, and R" are hydrogen, where Y and Z may be hydrogen or methyl, and where R is one of eight specific isoalloxazines. The court

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determined that this more limited generic class consisted of about 20 compounds. The limited number of compounds covered by the preferred formula in combination with the fact that the number of substituents was low at each site, the ring positions were limited, and there was a large unchanging structural nucleus, resulted in a finding that the reference sufficiently described "each of the various permutations here involved as fully as if he had drawn each structural formula or had written each name." The claimed compound was 1 of these 20 compounds. Therefore, the reference "described" the claimed compound and the reference anticipated the claims.

In *In re Schauman*, 572 F.2d 312, 197 USPQ 5 (CCPA 1978), claims to a specific compound were anticipated because the prior art taught a generic formula embracing a limited number of compounds closely related to each other in structure and the properties possessed by the compound class of the prior art was that disclosed for the claimed compound. The broad generic formula seemed to describe an infinite number of compounds but claim 1 was limited to a structure with only one variable substituent R. This substituent was limited to low alkyl radicals. One of ordinary skill in the art would at once envisage the subject matter within claim 1 of the reference.).

Compare *In re Meyer*, 599 F.2d 1026, 202 USPQ 175 (CCPA 1979) (A reference disclosing "alkaline chlorine or bromine solution" embraces a large number of species and cannot be said to anticipate claims to "alkali metal hypochlorite."); *Akzo N.V. v. International Trade Comm'n*, 808 F.2d 1471, 1 USPQ2d 1241 (Fed. Cir. 1986) (Claims to a process for making aramid fibers using a 98% solution of sulfuric acid were not anticipated by a reference which disclosed using sulfuric acid solution but which did not disclose using a 98% concentrated sulfuric acid solution.). See MPEP § 2144.08 for a discussion of obviousness in genus-species situations."

In this regard, it is also telling that none of the preferred embodiments disclosed by Toguchi et al. show or suggest Applicants' claimed limitations. For instance, for formula II-2 Toguchi et al. show only embodiments II-3, II-4, and II-5 (see column 12, lines 60-67; and formulas on columns 13 and 15), and none of these disclose or suggest Applicants' claims.

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Moreover, formula II-1 of Toguchi et al. is even more deficient because Toguchi et al. do not even bother to disclose any preferred species. Thus, clearly given the numerous permutations possible with Toughci's disclosed formula, Applicants claims cannot be "at once envisaged", and are thereby not obvious.

Furthermore, there is no motivation to arrive at Applicants' claims from Toguich et al.'s disclosure. In this respect, the Examiner merely asserts that it would be obvious "to apply the substitutions as required by the instant claims in order to have improved luminance", without mentioning why a person of skill in the art would be motivated to arrive at Applicants' limited Ar^1 , Ar^2 , R^1 , and R^2 positional substitutions. Indeed, Toguchi et al.'s disclosure could more readily be construed as "teaching away" from Applicants' claims, for the following reasons: One, not only do Toguchi et al. never mention or suggest the importance of Ar^1 , Ar^2 , R^1 , and R^2 positional substitutions for luminance, they indicate no difference between any of their $R_2^1 - R_2^{14}$ positions. Indeed, where Applicants' claims are limited to situations where the compound's binaphthyl framework can be independently substituted by a halogen, a hydroxyl group, or a substituted or non-substituted alkyl, alkenyl, alkoxy or alkoxy carbonyl group at any position except those occupied except those occupied by $(X^1)_n Ar^1$, $(X^2)_n Ar^2$, R^1 and R^2 , Toguchi et al.'s disclosure indicates that such substitutions at Ar^1 , Ar^2 , R^1 and R^2 are acceptable. This is clearly contrary to the teachings of Applicant's claims. Two, both of Toguchi et al.'s formulas recite the possibility of where "two of $R_2^1 - R_2^7$ and/or $R_2^8 - R_2^{14}$ may form a ring." In contrast, Applicants claims 4-5, 12 and 14 are directed to a formula where R^1 and R^2 (corresponding to R_2^1 and R_2^8 of Toguchi et al.) can be bound to each other to form a ring structure, a possibility which is not at all suggested by Toguchi et al. Three, as mentioned above, Toguchi et al.'s formula II-2 recites where "at least one of $R_2^1 - R_2^{14}$ is a diarylamino group represented by $-NAr_2^1 Ar_2^2$ wherein Ar_2^1 is a substituted aryl group having 6 to 20 carbon atoms which has at least one styryl substituent and Ar_2^2 is a substituted or unsubstituted aryl group having 6 to 20 carbon atoms", which is clearly not applicable to Applicants' claims. Four, Toguchi et. al. instead of showing, or even suggesting, Applicants' limitations at the Ar^1 , Ar^2 (corresponding to R_2^5 and R_2^{12} of Toguchi et al.'s disclosed generic formulas II-1 and II-2) suggest instead by their preferred embodiments that R_2^3 and R_2^{10} positions are more

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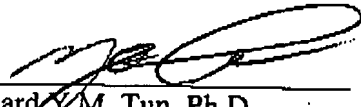
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advantageous. Accordingly, a person of skill in the art would not find Applicants' claims obvious in light of Toguichi et al., and these rejections should be withdrawn.

In view of the foregoing, applicant believes that the application is in condition for allowance and respectfully solicits a Notice of Allowance. The Commissioner is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 50-3881.

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Respectfully submitted,

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